

# Mehdi Ostadhassan

## List of Publications by Citations

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124  
papers

1,922  
citations

25  
h-index

39  
g-index

138  
ext. papers

2,576  
ext. citations

4.1  
avg, IF

5.82  
L-index

#	Paper	IF	Citations
124	Nanoscale pore structure characterization of the Bakken shale in the USA. <i>Fuel</i> , <b>2017</b> , 209, 567-578	7.1	154
123	Applications of nano-indentation methods to estimate nanoscale mechanical properties of shale reservoir rocks. <i>Journal of Natural Gas Science and Engineering</i> , <b>2016</b> , 35, 1310-1319	4.6	93
122	A new approach in petrophysical rock typing. <i>Journal of Petroleum Science and Engineering</i> , <b>2018</b> , 166, 445-464	4.4	72
121	A comprehensive pore structure study of the Bakken Shale with SANS, N <sub>2</sub> adsorption and mercury intrusion. <i>Fuel</i> , <b>2019</b> , 245, 274-285	7.1	66
120	Pore characterization of 3D-printed gypsum rocks: a comprehensive approach. <i>Journal of Materials Science</i> , <b>2018</b> , 53, 5063-5078	4.3	63
119	Raman spectroscopy to study thermal maturity and elastic modulus of kerogen. <i>International Journal of Coal Geology</i> , <b>2018</b> , 185, 103-118	5.5	61
118	Multifractal analysis of gas adsorption isotherms for pore structure characterization of the Bakken Shale. <i>Fuel</i> , <b>2018</b> , 219, 296-311	7.1	55
117	Microstructural and geomechanical analysis of Bakken shale at nanoscale. <i>Journal of Petroleum Science and Engineering</i> , <b>2017</b> , 153, 133-144	4.4	52
116	Quantification of the microstructures of Bakken shale reservoirs using multi-fractal and lacunarity analysis. <i>Journal of Natural Gas Science and Engineering</i> , <b>2017</b> , 39, 62-71	4.6	49
115	Application of PeakForce tapping mode of atomic force microscope to characterize nanomechanical properties of organic matter of the Bakken Shale. <i>Fuel</i> , <b>2018</b> , 233, 894-910	7.1	46
114	Organofacies study of the Bakken source rock in North Dakota, USA, based on organic petrology and geochemistry. <i>International Journal of Coal Geology</i> , <b>2018</b> , 188, 79-93	5.5	45
113	Statistical grid nanoindentation analysis to estimate macro-mechanical properties of the Bakken Shale. <i>Journal of Natural Gas Science and Engineering</i> , <b>2018</b> , 53, 181-190	4.6	42
112	Nanomechanical characterization of organic matter in the Bakken formation by microscopy-based method. <i>Marine and Petroleum Geology</i> , <b>2018</b> , 96, 128-138	4.7	41
111	Multi-scale fractal analysis of pores in shale rocks. <i>Journal of Applied Geophysics</i> , <b>2017</b> , 140, 1-10	1.7	37
110	NMR relaxometry a new approach to detect geochemical properties of organic matter in tight shales. <i>Fuel</i> , <b>2019</b> , 235, 167-177	7.1	37
109	Multifractal characteristics of Longmaxi Shale pore structures by N <sub>2</sub> adsorption: A model comparison. <i>Journal of Petroleum Science and Engineering</i> , <b>2018</b> , 168, 330-341	4.4	35
108	The impact of pore size distribution data presentation format on pore structure interpretation of shales. <i>Advances in Geo-Energy Research</i> , <b>2019</b> , 3, 187-197	6.2	35

107	Nano-dynamic mechanical analysis (nano-DMA) of creep behavior of shales: Bakken case study. <i>Journal of Materials Science</i> , <b>2018</b> , 53, 4417-4432	4.3	32
106	Nanopore structures of isolated kerogen and bulk shale in Bakken Formation. <i>Fuel</i> , <b>2018</b> , 226, 441-453	7.1	32
105	A further verification of FZI* and PSRTI: Newly developed petrophysical rock typing indices. <i>Journal of Petroleum Science and Engineering</i> , <b>2019</b> , 175, 693-705	4.4	32
104	Can 3-D Printed Gypsum Samples Replicate Natural Rocks? An Experimental Study. <i>Rock Mechanics and Rock Engineering</i> , <b>2018</b> , 51, 3061-3074	5.7	31
103	Application of nanoindentation to characterize creep behavior of oil shales. <i>Journal of Petroleum Science and Engineering</i> , <b>2018</b> , 167, 729-736	4.4	30
102	Multi-scale evaluation of mechanical properties of the Bakken shale. <i>Journal of Materials Science</i> , <b>2019</b> , 54, 2133-2151	4.3	27
101	New technique of True Effective Mobility (TEM-Function) in dynamic rock typing: Reduction of uncertainties in relative permeability data for reservoir simulation. <i>Journal of Petroleum Science and Engineering</i> , <b>2019</b> , 179, 210-227	4.4	25
100	Nanopore structure comparison between shale oil and shale gas: examples from the Bakken and Longmaxi Formations. <i>Petroleum Science</i> , <b>2019</b> , 16, 77-93	4.4	25
99	Microstructure characteristics and fractal analysis of 3D-printed sandstone using micro-CT and SEM-EDS. <i>Journal of Petroleum Science and Engineering</i> , <b>2019</b> , 175, 1039-1048	4.4	25
98	Characterization of geochemical properties and microstructures of the Bakken Shale in North Dakota. <i>International Journal of Coal Geology</i> , <b>2018</b> , 190, 84-98	5.5	24
97	Evaluating Molecular Evolution of Kerogen by Raman Spectroscopy: Correlation with Optical Microscopy and Rock-Eval Pyrolysis. <i>Energies</i> , <b>2018</b> , 11, 1406	3.1	24
96	Estimating permeability of shale-gas reservoirs from porosity and rock compositions. <i>Geophysics</i> , <b>2018</b> , 83, MR283-MR294	3.1	24
95	Coordinating gallium hexacyanocobaltate: Prussian blue-based nanomaterial for Li-ion storage.. <i>RSC Advances</i> , <b>2019</b> , 9, 26668-26675	3.7	23
94	Correlating Rock-Eval $\Gamma$ max with bitumen reflectance from organic petrology in the Bakken Formation. <i>International Journal of Coal Geology</i> , <b>2019</b> , 205, 87-104	5.5	23
93	Layered metal-organic framework based on tetracyanonickelate as a cathode material for Li-ion storage.. <i>RSC Advances</i> , <b>2019</b> , 9, 21363-21370	3.7	23
92	Estimating thermal maturity of organic-rich shale from well logs: Case studies of two shale plays. <i>Fuel</i> , <b>2019</b> , 235, 1195-1206	7.1	22
91	Fractal and Multifractal Characteristics of Pore Throats in the Bakken Shale. <i>Transport in Porous Media</i> , <b>2019</b> , 126, 579-598	3.1	21
90	Pd modified prussian blue frameworks: Multiple electron transfer pathways for improving catalytic activity toward hydrogenation of nitroaromatics. <i>Molecular Catalysis</i> , <b>2020</b> , 492, 110967	3.3	20

89	Pore structure and adsorption hysteresis of the middle Jurassic Xishanyao shale formation in the Southern Junggar Basin, northwest China. <i>Energy Exploration and Exploitation</i> , <b>2021</b> , 39, 761-778	2.1	20
88	Graphite carbon-encapsulated metal nanoparticles derived from Prussian blue analogs growing on natural loofa as cathode materials for rechargeable aluminum-ion batteries. <i>Scientific Reports</i> , <b>2019</b> , 9, 13665	4.9	18
87	Flow modeling in shale gas reservoirs: A comprehensive review. <i>Journal of Natural Gas Science and Engineering</i> , <b>2020</b> , 83, 103535	4.6	18
86	Geomechanical Upscaling Methods: Comparison and Verification via 3D Printing. <i>Energies</i> , <b>2019</b> , 12, 3823	3.1	17
85	Multi-scale assessment of mechanical properties of organic-rich shales: A coupled nanoindentation, deconvolution analysis, and homogenization method. <i>Journal of Petroleum Science and Engineering</i> , <b>2019</b> , 174, 80-91	4.4	17
84	Understanding organic matter heterogeneity and maturation rate by Raman spectroscopy. <i>International Journal of Coal Geology</i> , <b>2019</b> , 206, 46-64	5.5	15
83	Structural Evolution of Organic Matter in Deep Shales by Spectroscopy (1H and 13C Nuclear Magnetic Resonance, X-ray Photoelectron Spectroscopy, and Fourier Transform Infrared) Analysis. <i>Energy &amp; Fuels</i> , <b>2020</b> , 34, 2807-2815	4.1	14
82	Chemical heterogeneity of organic matter at nanoscale by AFM-based IR spectroscopy. <i>Fuel</i> , <b>2020</b> , 261, 116454	7.1	14
81	A new framework for selection of representative samples for special core analysis. <i>Petroleum Research</i> , <b>2020</b> , 5, 210-226	1.4	13
80	Molecular weight variations of kerogen during maturation with MALDI-TOF-MS. <i>Fuel</i> , <b>2020</b> , 269, 117452	7.1	13
79	Nanoscale Pore Structure Characterization of Tight Oil Formation: A Case Study of the Bakken Formation. <i>Energy &amp; Fuels</i> , <b>2019</b> , 33, 6008-6019	4.1	12
78	Evaluating Single-Parameter parabolic failure criterion in wellbore stability analysis. <i>Journal of Natural Gas Science and Engineering</i> , <b>2018</b> , 50, 166-180	4.6	12
77	Creep Behavior of Shale: Nanoindentation vs. Triaxial Creep Tests. <i>Rock Mechanics and Rock Engineering</i> , <b>2021</b> , 54, 321-335	5.7	12
76	Prediction of Dead Oil Viscosity: Machine Learning vs. Classical Correlations. <i>Energies</i> , <b>2021</b> , 14, 930	3.1	12
75	Multifractal Characteristics of MIP-Based Pore Size Distribution of 3D-Printed Powder-Based Rocks: A Study of Post-Processing Effect. <i>Transport in Porous Media</i> , <b>2019</b> , 129, 599-618	3.1	11
74	Comparison of fractal dimensions from nitrogen adsorption data in shale different models.. <i>RSC Advances</i> , <b>2021</b> , 11, 2298-2306	3.7	11
73	A chemo-mechanical snapshot of in-situ conversion of kerogen to petroleum. <i>Geochimica Et Cosmochimica Acta</i> , <b>2020</b> , 273, 37-50	5.5	9
72	Optimal Separation of CO <sub>2</sub> /CH <sub>4</sub> /Brine with Amorphous Kerogen: A Thermodynamics and Kinetics Study. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 20877-20883	3.8	9

71	Nanochemo-mechanical characterization of organic shale through AFM and EDS <b>2017</b> ,		9
70	Abnormal behavior during nanoindentation holding stage: Characterization and explanation. <i>Journal of Petroleum Science and Engineering</i> , <b>2019</b> , 173, 733-747	4-4	9
69	Characterization and Consecutive Prediction of Pore Structures in Tight Oil Reservoirs. <i>Energies</i> , <b>2018</b> , 11, 2705	3-1	9
68	Natural fractures in metamorphic basement reservoirs in the Liaohe Basin, China. <i>Marine and Petroleum Geology</i> , <b>2020</b> , 119, 104479	4-7	8
67	Hydrocarbon saturation in shale oil reservoirs by inversion of dielectric dispersion logs. <i>Fuel</i> , <b>2020</b> , 266, 116934	7-1	8
66	Image analysis of the pore structures: An intensive study for Middle Bakken. <i>Journal of Natural Gas Science and Engineering</i> , <b>2019</b> , 61, 32-45	4-6	8
65	Bacterial vs. thermal degradation of algal matter: Analysis from a physicochemical perspective. <i>International Journal of Coal Geology</i> , <b>2020</b> , 223, 103465	5-5	7
64	Preliminary Investigation of the Effects of Thermal Maturity on Redox-Sensitive Trace Metal Concentration in the Bakken Source Rock, North Dakota, USA. <i>ACS Omega</i> , <b>2020</b> , 5, 7135-7148	3-9	7
63	A new model to estimate permeability using mercury injection capillary pressure data: Application to carbonate and shale samples. <i>Journal of Natural Gas Science and Engineering</i> , <b>2020</b> , 84, 103691	4-6	7
62	Pore Structure Analysis by Using Atomic Force Microscopy <b>2016</b> ,		7
61	A cost-effective chemo-thermo-poroelastic wellbore stability model for mud weight design during drilling through shale formations. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , <b>2020</b> , 12, 768-779	5-3	7
60	Experimental Study on the Impact of Thermal Maturity on Shale Microstructures Using Hydrous Pyrolysis. <i>Energy &amp; Fuels</i> , <b>2019</b> , 33, 9702-9719	4-1	6
59	Characterizing Pore Size Distributions of Shale <b>2019</b> , 3-20		6
58	Adsorption based realistic molecular model of amorphous kerogen.. <i>RSC Advances</i> , <b>2020</b> , 10, 23312-23320	3-7	6
57	Petrophysical characteristics and log identification of lacustrine shale lithofacies: A case study of the first member of Qingshankou Formation in the Songliao Basin, Northeast China. <i>Interpretation</i> , <b>2020</b> , 8, SL45-SL57	1-4	6
56	Joint optimization of constrained well placement and control parameters using teaching-learning based optimization and an inter-distance algorithm. <i>Journal of Petroleum Science and Engineering</i> , <b>2021</b> , 203, 108652	4-4	6
55	Estimation of thermal maturity in the Bakken source rock from a combination of well logs, North Dakota, USA. <i>Marine and Petroleum Geology</i> , <b>2019</b> , 105, 32-44	4-7	5
54	Evaluating the Impact of Mechanical Properties of Kerogen on Hydraulic Fracturing of Organic Rich Formations <b>2018</b> ,		5

53	A geomechanical study of Bakken Formation considering the anisotropic behavior of shale layers. <i>Journal of Petroleum Science and Engineering</i> , <b>2018</b> , 165, 567-574	4.4	5
52	Study on array laterolog response simulation and mud-filtrate invasion correction. <i>Advances in Geo-Energy Research</i> , <b>2019</b> , 3, 175-186	6.2	5
51	Effective fractures and their contribution to the reservoirs in deep tight sandstones in the Kuqa Depression, Tarim Basin, China. <i>Marine and Petroleum Geology</i> , <b>2021</b> , 124, 104824	4.7	5
50	Organic geochemistry, oil-source rock, and oil-oil correlation study in a major oilfield in the Middle East. <i>Journal of Petroleum Science and Engineering</i> , <b>2021</b> , 207, 109074	4.4	5
49	Time-frequency decomposition of seismic signals via quantum swarm evolutionary matching pursuit. <i>Geophysical Prospecting</i> , <b>2019</b> , 67, 1701-1719	1.9	4
48	Refracturing: well selection, treatment design, and lessons learned—review. <i>Arabian Journal of Geosciences</i> , <b>2019</b> , 12, 1	1.8	4
47	Natural fractures in tight gas volcanic reservoirs and their influences on production in the Xujiaweizi depression, Songliao Basin, China. <i>AAPG Bulletin</i> , <b>2020</b> , 104, 2099-2123	2.5	4
46	A comparison study of the unloading behavior in shale samples in nanoindentation experiments using different models. <i>Journal of Petroleum Science and Engineering</i> , <b>2020</b> , 186, 106715	4.4	4
45	Reassessment of CO <sub>2</sub> sequestration in tight reservoirs and associated formations. <i>Journal of Petroleum Science and Engineering</i> , <b>2021</b> , 206, 109071	4.4	4
44	From excess to absolute adsorption isotherm: The effect of the adsorbed density. <i>Chemical Engineering Journal</i> , <b>2021</b> , 425, 131495	14.7	4
43	Natural fractures in deep tight gas sandstone reservoirs in the thrust belt of the southern Junggar Basin, northwestern China. <i>Interpretation</i> , <b>2020</b> , 8, SP81-SP93	1.4	3
42	Quantifying the Nano-Mechanical Signature of Shale Oil Formations by Grid Nanoindentation <b>2017</b> ,		3
41	Backtracking to Parent Maceral from Produced Bitumen with Raman Spectroscopy. <i>Minerals (Basel, Switzerland)</i> , <b>2020</b> , 10, 679	2.4	3
40	1D mechanical earth modeling in the Permian Lucaogou Shale of the Santanghu Basin, Northwest China, from a complete set of laboratory data. <i>Interpretation</i> , <b>2021</b> , 9, T357-T372	1.4	3
39	Pore Structure Alteration of Organic-Rich Shale with Sc-CO <sub>2</sub> Exposure: the Bakken Formation. <i>Energy &amp; Fuels</i> , <b>2021</b> , 35, 5074-5089	4.1	3
38	Sulfur Differentiation in Organic-Rich Shales and Carbonates via Open-System Programmed Pyrolysis and Oxidation: Insights into Fluid Sourcing and H <sub>2</sub> S Production in the Bakken Shale, United States. <i>Energy &amp; Fuels</i> , <b>2021</b> , 35, 12030-12044	4.1	3
37	Potential Application of Atomic Force Microscopy in Characterization of Nano-pore Structures of Bakken Formation <b>2016</b> ,		3
36	Integrating advanced soft computing techniques with experimental studies for pore structure analysis of Qingshankou shale in Southern Songliao Basin, NE China. <i>International Journal of Coal Geology</i> , <b>2022</b> , 103998	5.5	3

35	Fine Scale Characterization of Shale Reservoirs. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2018</b> ,	0.1	2
34	Porosity prediction from pre-stack seismic data via committee machine with optimized parameters. <i>Journal of Petroleum Science and Engineering</i> , <b>2022</b> , 210, 110067	4.4	2
33	Geomechanical Study of Bakken Formation for Improved Oil Recovery		2
32	Developing an Amorphous Kerogen Molecular Model Based on Gas Adsorption Isotherms		2
31	A real-world impact of offset frac-hits by rate transient analysis in the Bakken and Three Forks, North Dakota, USA. <i>Journal of Petroleum Science and Engineering</i> , <b>2021</b> , 208, 109710	4.4	2
30	Sedimentary architecture of hyperpycnal flow deposits: Cretaceous Sangyuan outcrop, from the Luanping Basin, North East China. <i>Marine and Petroleum Geology</i> , <b>2020</b> , 121, 104593	4.7	2
29	Prediction of Water Saturation from Well Log Data by Machine Learning Algorithms: Boosting and Super Learner. <i>Journal of Marine Science and Engineering</i> , <b>2021</b> , 9, 666	2.4	2
28	Experimental Measurement and Equilibrium Modeling of Adsorption of Asphaltenes from Various Origins onto the Magnetite Surface under Static and Dynamic Conditions. <i>ACS Omega</i> , <b>2021</b> , 6, 24256-24288	3.9	2
27	AFM vs. Nanoindentation: Nanomechanical properties of organic-rich Shale. <i>Marine and Petroleum Geology</i> , <b>2021</b> , 132, 105229	4.7	2
26	A case study of petrophysical rock typing and permeability prediction using machine learning in a heterogenous carbonate reservoir in Iran.. <i>Scientific Reports</i> , <b>2022</b> , 12, 4505	4.9	2
25	A preliminary optimization of borehole microseismic array design with a multiple criteria decision analysis. <i>Journal of Applied Geophysics</i> , <b>2018</b> , 157, 87-95	1.7	1
24	Measurement of Solubility of CO <sub>2</sub> in NaCl, CaCl <sub>2</sub> , MgCl <sub>2</sub> and MgCl <sub>2</sub> + CaCl <sub>2</sub> Brines at Temperatures from 298 to 373 K and Pressures up to 20 MPa Using the Potentiometric Titration Method. <i>Energies</i> , <b>2021</b> , 14, 7222	3.1	1
23	Proper Experimental Parameters in N <sub>2</sub> Adsorption: The Effects of Data Points and Equilibrium Interval Time. <i>Energy &amp; Fuels</i> ,	4.1	1
22	Understanding the creep behavior of shale via nano-DMA method. <i>Energy Reports</i> , <b>2021</b> , 7, 7478-7487	4.6	1
21	Joint optimization of constrained well placement and control parameters with a quantum-inspired cell-based quality gate function. <i>Journal of Petroleum Science and Engineering</i> , <b>2021</b> , 209, 109854	4.4	1
20	Determination of Clay Bound Water in Shales from NMR Signals: The Fractal Theory. <i>Energy &amp; Fuels</i> ,	4.1	1
19	Diffusivity and hydrophobic hydration of hydrocarbons in supercritical CO and aqueous brine.. <i>RSC Advances</i> , <b>2020</b> , 10, 37938-37946	3.7	1
18	Natural Fractures in Carbonate Basement Reservoirs of the Jizhong Sub-Basin, Bohai Bay Basin, China: Key Aspects Favoring Oil Production. <i>Energies</i> , <b>2020</b> , 13, 4635	3.1	1

17	Nanoscale mechanical properties of 3D printed gypsum-powder-based rocks by nanoindentation and numerical modeling. <i>Rapid Prototyping Journal</i> , <b>2019</b> , 25, 1295-1308	3.8	1
16	Evaluation of 3D printed microfluidic networks to study fluid flow in rocks. <i>Oil and Gas Science and Technology</i> , <b>2021</b> , 76, 50	1.9	1
15	Experimental Investigation of Solid Organic Matter with a 2D NMR T1ρ2 Map. <i>Energy &amp; Fuels</i> ,	4.1	1
14	Evaluation of different machine learning frameworks to predict CNL-FDC-PEF logs via hyperparameters optimization and feature selection. <i>Journal of Petroleum Science and Engineering</i> , <b>2022</b> , 208, 109463	4.4	1
13	TGA and elemental analysis of type II kerogen from the Bakken supported by HRTEM. <i>Journal of Natural Gas Science and Engineering</i> , <b>2022</b> , 104606	4.6	1
12	Controls of fault-bend fold on natural fractures: Insight from discrete element simulation and outcrops in the southern margin of the Junggar Basin, Western China. <i>Marine and Petroleum Geology</i> , <b>2022</b> , 138, 105541	4.7	0
11	Predicting the surfactant-polymer flooding performance in chemical enhanced oil recovery: Cascade neural network and gradient boosting decision tree. <i>AEJ - Alexandria Engineering Journal</i> , <b>2022</b> , 61, 7715-7731	6.1	0
10	Modeling Interfacial Tension of N2/CO2 Mixture + n-Alkanes with Machine Learning Methods: Application to EOR in Conventional and Unconventional Reservoirs by Flue Gas Injection. <i>Minerals (Basel, Switzerland)</i> , <b>2022</b> , 12, 252	2.4	0
9	Theoretical Prediction of the Occurrence of Gas Hydrate Stability Zones: A Case Study of the Mohe Basin, Northeast China.. <i>ACS Omega</i> , <b>2021</b> , 6, 35810-35820	3.9	0
8	Nano-mechanical Properties. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2018</b> , 71-89	0.1	
7	Geochemical Properties. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2018</b> , 57-70	0.1	
6	Estimation of Mechanical Properties of the Bakken Shales Through Convolutional Neural Networks. <i>Rock Mechanics and Rock Engineering</i> , <b>2022</b> , 55, 1213	5.7	
5	Pore Structures. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2018</b> , 17-56	0.1	
4	Pressure Transient Analysis. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2022</b> , 35-64	0.1	
3	Unconventional Oil and Gas Reservoirs. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2022</b> , 1-10	0.1	
2	Rate Transient Analysis. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2022</b> , 65-99	0.1	
1	Unconventional Reservoir Engineering. <i>SpringerBriefs in Petroleum Geoscience &amp; Engineering</i> , <b>2022</b> , 11-34	0.1	